



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/501,026

07/09/2004

Robert D. Coleman

7255-5

3624

30565

7590

06/10/2009

WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP  
111 MONUMENT CIRCLE, SUITE 3700  
INDIANAPOLIS, IN 46204-5137

EXAMINER

CHUI, MEI PING

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

06/10/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/501,026	<b>Applicant(s)</b> COLEMAN, ROBERT D.	
	<b>Examiner</b> MEI-PING CHUI	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03/23/2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 7-9, 13-14, 26-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12 and 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1616

***DETAILED ACTION***

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/23/2009 has been entered.

***Status of Action***

Receipt of Amendments/Remarks filed on 02/23/2009 is acknowledged. Claims 1-32 are pending in this application. Claims 1, 17 have been amended; claims 2-6, 10-12, 15-16, 18-25 are originally presented.

***Status of Claims***

Accordingly, claims **1-6, 10-12, 15-25** are presented for examination on the merits for patentability as they read upon the elected subject matter and claims 7-9, 13-14, 26-32 directed to non-elected invention are withdrawn.

Rejection(s) not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Art Unit: 1616

***Response to Arguments***

Applicant's arguments with respect to claims **1-6, 10-12, 15-25** have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**(1) Claim 1, 3-4, 15, 17-18, 20, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tate, D. (WO 91/13552) in view of Puritch et al. (U. S. Patent No. 4,975,110).**

***Applicant Claims***

Applicant claims a fungicidal composition comprising (i) a fatty acid, i.e. oleic acid or palmitic acid; (ii) an organic carboxylic acid, i.e. alanine, aspartic acid or glutamic acid, (iii) a carrier; (iv) at least one emulsifier, and (v) the composition further comprising an adjuvant or a diluent.

***Determination of the scope and content of the prior art******(MPEP 2141.01)***

Tate, D. teaches a fungicidal composition for application to plants (page 1, line 1). Tate, D. teaches that the fungicidal composition comprises chemo-tactic ingredients that can be used to combat fungal and other myco-pathogenic infections in plants (page 1, lines 9 and 11-13). Tate, D. also teaches that the chemo-tactic ingredients are substances that produce a positive myco-chemotaxic response from the target fungi, wherein the chemo-tactic ingredients includes amino acids, i.e. glutamic acid, aspartic acid, or alanine, and fatty acids, i.e. oleic acid or palmitic acid added into water (page 2, lines 36-38; page 3, lines 1-3 and 18-25, and page 10, Examples 6 and 7). It is known that amino acid alanine has a methyl side chain and a single carboxylic acid functionality contain in its structure, and palmitic acid is a C16-fatty acid. Therefore, the teaching of Tate, D. meets the claimed limitation as recited in claims 1 and 3.

Tate, D. further teaches that the fungicidal formulation also comprises suitable diluents, carriers, or additives, which is usually present in a fungicidal composition (page 5, lines 31-37).

Applicant recites the intended use of the composition in claims 20 and 25, which the composition is suitable for application to harvested fruits, vegetables, berries, seeds, leaves, flowers and nuts. The intended use of the claimed composition does not patentably distinguish

Art Unit: 1616

the composition, per se, since such undisclosed use is inherent in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting.

***Ascertainment of the difference between the prior art and the claims***  
***(MPEP 2141.02)***

Tate, D. does not teach the fungicidal composition comprises at least one emulsifier. However, the deficiency is cured by Puritch et al.

Puritch et al. teach an environmentally compatible pesticide composition comprising a fatty acid as active ingredient, which can be made into the form of a ready-to-use emulsion (Abstract; column 1, lines 1, 11-12). Puritch et al. also teach that besides the fatty acid component, emulsifier component can be used to obtain a pesticidal emulsion (column 4, lines 38-40).

***Finding of prima facie obviousness Rational and Motivation***  
***(MPEP 2142-2143)***

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teaching of Tate, D. and Puritch et al. to arrive at the instant claimed invention.

One of ordinary skill also would have been motivated to incorporate an emulsifier into the composition in order to obtain an emulsion, as taught by Puritch et al. Therefore, it is a

Art Unit: 1616

routine optimization and would have been obvious for one of ordinary skill in the art to do so, when needed.

From the teachings of the references, one of ordinary skill in the art would have had a reasonable expectation of success to arrive at the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

It is also noted that the instant claims are written using the transitional phrase "comprising", which is a fully open-ended format, and thus can include any unrecited additional element in the composition.

**(2) Claim 1-6, 10-12 and 15-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sedun et al. (U. S. Patent No. 5,246,716) in view of Shalom, B. D. (U. S. Patent No. 5,143,718), and further in view of Puritch et al. (U. S. Patent No. 4,975,110).**

### *Applicant Claims*

Applicant claims a composition comprising (i) a fatty acid having 5-22 carbon atoms, i.e. octanoic acid or pelargonic acid, present in an amount of 1-99 % by volume, (ii) an organic carboxylic acid, i.e. glycolic acid, present in an amount of 0.01-80 % by volume, and (iii) a carrier, i.e. water or vegetable oil. Applicant also claims the composition comprising an emulsifier or a diluent.

### *Determination of the scope and content of the prior art*

**(MPEP 2141.01)**

Art Unit: 1616

Sedun et al. teach an environmental safe and non-phytotoxic composition which is useful in protecting plants from fungal infection (column 1, lines 6-8).

Sedun et al. teach that the fungicidal composition comprises an effective amount of one active ingredient, or a mixture, from metal salts of mono-carboxylic fatty acids, which having 4 to 18 carbon atoms, and a liquid carrier (column 1, lines 55-58 and 62),

Sedun et al. also teach that the fatty acid metal salt active can be the sole active ingredient, or in combination with other active ingredients that can broaden the antifungal spectrum of the composition (column 1, lines 65-67 and column 2, line 1).

Sedun et al. also teach that the metal salts of the fatty acid can be calcium salts of octanoate, nonanoate, hexanoate or heptanoate, which is present in an amount from about 0.05-5 % by weight relative to the total weight of the composition. In addition, Sedun et al. teach that the effective amount of the active fatty acid salt will vary depending upon the identity of the fatty salt used, as some fatty acids are more fungicidally potent than others (column 2, lines 49-57 and column 12, claims 5-7).

Sedun et al. also teach that the composition comprises a carrier, i.e. water. However, other useful carriers, i.e. vegetable oils, light mineral oils, or cottonseed oil, can also be used to substitute water for the composition (column 3, lines 18, and 21-29). Furthermore, Sedun et al. teach that the composition can be in the form of a concentrated, or it can be further diluted with water prior to use (column 4, lines 1, 17, 39-41 and 55-59).

Sedun et al. teach that the fungicidal composition also comprises formulation enhancing agents, i.e. gums, dispersants or wetting agents (column 2, lines 3-9).

It is noted that octanoic and nonanoic acids are known in the art as caprylic acid and



Art Unit: 1616

pelargonic acid, respectively.

**With respect to claims 2, 21 and 22**, Sedun et al. teach that the metal salt of the fatty acid, i.e. nonanoic acid, which is present in an amount from about 0.05 % to 5.0 % by weight relative to the total weight of the composition (column 2, lines 49-57 and column 12, claims 5-7). The % volume of the fatty acid, i.e. nonanoic acid, for example, presents in the composition can be calculated by converting the % weight of the nonanoic acid into the % volume using the density (0.9 g/ml) of nonanoic acid. For example, 0.05 % to 5 % by weight of nonanoic acid corresponds to 0.056 % to 5.56 % by volume of nonanoic acid in the composition.

*Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)*

(1) Sedun et al. do not teach the fungicidal composition comprising an organic carboxylic acid, which is different than the fatty acid as claimed. However, this deficiency is cured by the teaching of Shalom, B. D.

Shalom, B. D. teaches a composition comprising one or more of organic acids and a carrier, wherein the organic acids are known to possess antifungal properties (column 2, lines 49-60). Shalom, B. D. teaches that the useful organic acids are benzoic acid, salicylic acid, ascorbic acid, fatty acids, i.e. oleic acid, linoleic acid, undecenoic acid, octanoic acid, palmitic acid or stearic acid, formic acid, fumaric acid, cinnamic acid, and naturally occurring amino acids, i.e. glycine, alanine, valine, leucine, isoleucine, serine or threonine (column 3, lines 1-13, and column 6, claims 1 and 4). Shalom, B. D. also teaches that the carrier of the composition is a liquid carrier, i.e. alcohol (column 4, line 3). In addition, Shalom, B. D. teaches that the fatty

Art Unit: 1616

acids, i.e. undecenoic acid and octanoic acid, are known to have anti-fungal properties (column 3, lines 45-47).

Shalom, B. D. teaches that the composition can comprise amino acids, i.e. alanine or valine, in which alanine has a methyl side-chain and valine has an isopropyl side-chain, as well as carboxylic acid functionality contain in their structures.

Shalom, B. D. also teaches that the composition can comprise fatty acid, i.e. octanoic acid, which is commonly known as caprylic acid.

(2) Sedun et al. also do not teach the composition comprising an emulsifier. However, the deficiency is cured by Puritch et al.

Puritch et al. teach an environmentally compatible pesticide composition comprising a fatty acid as active ingredient, which can be made into the form of a ready-to-use emulsion (Abstract; column 1, lines 1, 11-12). Puritch et al. also teach that besides the fatty acid component, emulsifier component can be used to obtain a pesticidal emulsion (column 4, lines 38-40).

***Finding of prima facie obviousness Rational and Motivation  
(MPEP 2142-2143)***

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teaching of Sedun et al. with Shalom, B. D. and Puritch et al. to arrive at the instant invention.

One of ordinary skill also would have been motivated to utilize a combination of fatty acids and organic acids, i.e. amino acids, in a fungicidal composition because the prior art Puritch et al. teach the fatty acids and amino acid, as those instantly claimed, possess antifungal

Art Unit: 1616

properties. Therefore, it would have been obvious for one of ordinary skill in the art to employ them together.

One of ordinary skill also would have been motivated to incorporate an emulsifier into the composition in order to obtain an emulsion, as taught by Puritch et al. Therefore, it is a routine optimization and would have been obvious for one of ordinary skill in the art to do so, when needed.

With respect to the ratio of fatty acid and organic acid, and the volume of organic acid, as instantly claimed, it is merely judicious selection and routine optimization, which would be depended on the selected fatty acid and organic acid.

**With respect to claims 19, 20 and 25,** Applicant recites the intended use of the instant composition in that the composition is suitable for dilution and provides as a ready-to-use formulation for applications to fruits, vegetables, berries, seeds or nuts after harvesting. However, the intended use of the claimed composition does not patentably distinguish the prior art composition, per se, since such undisclosed use is intrinsic in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use of the instantly claimed composition does not create a structural difference that distinguishes it from the prior art composition, thus the intended use is not limiting.

From the teaching of the references, one of ordinary skill in the art would have had a reasonable expectation of success to arrive at the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

***Conclusion***

No claims are allowed.

***Contact Information***

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached on Monday-Thursday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PRIVATE PAIR or PUBLIC PAIR. Status information for unpublished applications is available through PRIVATE PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the PRIVATE PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/H. C./

Examiner, Art Unit 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616